09/539382

```
FILE 'HOME' ENTERED AT 16:19:18 ON 03 APR 2002

=> file uspatfull
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     1.68       1.68

FILE 'USPATFULL' ENTERED AT 16:24:00 ON 03 APR 2002
CA INDEXING COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 2 Apr 2002 (20020402/PD)
FILE LAST UPDATED: 2 Apr 2002 (20020402/ED)
HIGHEST GRANTED PATENT NUMBER: US6367080
HIGHEST APPLICATION PUBLICATION NUMBER: US2002038473
CA INDEXING IS CURRENT THROUGH 2 Apr 2002 (20020402/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 2 Apr 2002 (20020402/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2001
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2001

>>>  USPAT2 is now available.  USPATFULL contains full text of the     <<<
>>>  original, i.e., the earliest published granted patents or         <<<
>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
>>>  USPATFULL.  A USPATFULL record contains not only the original     <<<
>>>  published document but also a list of any subsequent              <<<
>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
>>>  are displayed in the PI (Patent Information) field of USPATFULL   <<<
>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                         <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together        <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to          <<<
>>>  enter this cluster.                                               <<<
>>>                                                                    <<<
>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from     <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s (expression in plant!) and (anti-idiotyp?) \
MISSING OPERATOR IDIOTYP?) \
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s (expression in plant!) and (anti-idiotyp?)
        127436 EXPRESSION
         98866 PLANT!
          1022 EXPRESSION IN PLANT!
                 (EXPRESSION(1W)PLANT!)
        227953 ANTI
          3658 IDIOTYP?
          2471 ANTI-IDIOTYP?
                 (ANTI(W)IDIOTYP?)
L1          10 (EXPRESSION IN PLANT!) AND (ANTI-IDIOTYP?)
```

```
=> 'dup rem l1
'DUP IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2            10 DUP REM L1 (0 DUPLICATES REMOVED)

=> d l2 1-10 bib ab

L2   ANSWER 1 OF 10  USPATFULL
AN     2002:54665  USPATFULL
TI     Glucan-containing compositions and paper
IN     Nichols, Scott E., Johnston, IA, UNITED STATES
PI     US 2002031826      A1   20020314
AI     US 2000-740274     A1   20001219 (9)
RLI    Division of Ser. No. US 1998-210361, filed on 11 Dec 1998, PENDING
       Continuation-in-part of Ser. No. US 1998-9620, filed on 20 Jan 1998,
       GRANTED, Pat. No. US 6127603 Continuation-in-part of Ser. No. US
       1998-7999, filed on 16 Jan 1998, GRANTED, Pat. No. US 6087559
       Continuation-in-part of Ser. No. US 1998-8172, filed on 16 Jan 1998,
       GRANTED, Pat. No. US 6127602 Continuation of Ser. No. US 1995-485243,
       filed on 7 Jun 1995, GRANTED, Pat. No. US 5712107 Continuation of Ser.
       No. US 1995-478704, filed on 7 Jun 1995, ABANDONED Continuation of Ser.
       No. US 1995-482711, filed on 7 Jun 1995, ABANDONED
DT     Utility
FS     APPLICATION
LREP   Catherine D. Brooke, Patent Agent, 7100 N.W. 62nd Avenue, P.O. Box 1000,
       Johnston, IA, 50131-1000
CLMN   Number of Claims: 34
ECL    Exemplary Claim: 15
DRWN   No Drawings
LN.CNT 3136
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     The present invention provides methods of making paper, utilizing
       glucans, produced by the glucosyltransferase B, C or D enzyme of the
       species Streptococcus mutans, instead of modified starches. The present
       glucans are functionally similar to currently utilized modified starches
       and are particularly useful in the coating step of paper manufacture.
       The present glucans also exhibit thermoplastic properties and impart
       gloss to the paper during the coating step.

L2   ANSWER 2 OF 10  USPATFULL
AN     2001:237672  USPATFULL
TI     Recombinant bacterial phytases and uses thereof
IN     Short, Jay M., Rancho Santa Fe, CA, United States
       Kretz, Keith A., San Marcos, CA, United States
PA     Diversa Corporation (U.S. corporation)
PI     US 2001055788      A1   20011227
AI     US 2001-777566     A1   20010205 (9)
RLI    Continuation of Ser. No. US 1999-318528, filed on 25 May 1999, GRANTED,
       Pat. No. US 6183740 Continuation-in-part of Ser. No. US 1999-291931,
       filed on 13 Apr 1999, GRANTED, Pat. No. US 6190897 Continuation of Ser.
       No. US 1999-259214, filed on 1 Mar 1999, GRANTED, Pat. No. US 6110719
```

Division of Ser. No. US 1997-910798, filed on 13 Aug 1997, GRANTED, Pat. No. US 5876997
DT Utility
FS APPLICATION
LREP Lisa A. Haile, Ph.D., Gray Cary Ware & Freidenrich LLP, Suite 1600, 4365 Executive Drive, San Diego, CA, 92121-2189
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 2934
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A purified recombinant phytase enzyme derived from Escherichia coli B. The enzyme has a molecular weight of about 47.1 kilodaltons and has phytase activity (SEQ ID NO:2). The enzyme can be produced from native or recombinant host cells and can be used to aid in the digestion of phytate where desired. In particular, the phytase of the present invention can be used in foodstuffs to improve the feeding value of phytate rich ingredients.

L2 ANSWER 3 OF 10 USPATFULL
AN 2001:197264 USPATFULL
TI Maize aquaporins and uses thereof
IN Jung, Rudolf, Des Moines, IA, United States
Chaumont, Francois, Louvain-la-Neuve, Belgium
Chrispeels, Maarten, La Jolla, CA, United States
PA Pioneer Hi-Bred International, Inc., Des Moines, IA, United States (U.S. corporation)
The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
PI US 6313376 B1 20011106
AI US 1999-372448 19990811 (9)
PRAI US 1998-96627P 19980814 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Fox, David T.; Assistant Examiner: Ibrahim, Medina A.
LREP Pioneer Hi-Bred International, Inc.
CLMN Number of Claims: 40
ECL Exemplary Claim: 1,4,5,8,13
DRWN No Drawings
LN.CNT 3369
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides isolated maize aquaporin nucleic acids and their encoded proteins. The present invention provides methods and compositions relating to altering aquaporin concentration and/or composition of plants. The invention further provides recombinant expression cassettes, host cells, transgenic plants, and antibody compositions.

L2 ANSWER 4 OF 10 USPATFULL
AN 2001:197263 USPATFULL
TI Maize aquaporins and uses thereof
IN Jung, Rudolf, Des Moines, IA, United States
Barrieu, Francois, Bordeaux, France
PA Pioneer Hi-Bred International, Inc., Des Moines, IA, United States (U.S. corporation)
PI US 6313375 B1 20011106
AI US 1999-372422 19990811 (9)

PRAI US 1998-98692P 19980813 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Fox, David T.; Assistant Examiner: Ibrahim, Medina A.
LREP Pioneer Hi-Bred International, Inc.
CLMN Number of Claims: 40
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 3234
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides isolated maize aquaporin nucleic acids and their encoded proteins. The present invention provides methods and compositions relating to altering aquaporin concentration and/or composition of plants. The invention further provides recombinant expression cassettes, host cells, transgenic plants, and antibody compositions.

L2 ANSWER 5 OF 10 USPATFULL
AN 2001:185451 USPATFULL
TI Intracellular antifreeze polypeptides and nucleic acids
IN Hew, Choy, Thornhill, Canada
Gong, Zhiyuan, Toronto, Canada
PA HSC Research and Development Ltd. Partnership, Toronto, Canada (non-U.S. corporation)
PI US 6307020 B1 20011023
WO 9728260 19970807
AI US 1998-117121 19981120 (9)
WO 1997-CA62 19970130
19981120 PCT 371 date
19981120 PCT 102(e) date
DT Utility
FS GRANTED
EXNAM Primary Examiner: Carlson, Karen Cochrane; Assistant Examiner: Robinson, Hope A.
LREP Townsend and Townsend and Crew LLP
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 21 Drawing Figure(s); 20 Drawing Page(s)
LN.CNT 2175
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A family of related intracellular skin type antifreeze polypeptides and corresponding coding nucleic acids are provided. These are the first skin type intracellular antifreeze polypeptides and coding nucleic acids ever reported. The polypeptides are naturally expressed in the skin of Winter Flounder, and skin specific promoters are also provided. The polypeptides are used to make cells cold-resistant, and to improve the palatability of cold foods and liquids. Cold resistant eukaryotes and prokaryotes, including plants, animals and bacteria are made using the skin-type intracellular antifreeze polypeptides and nucleic acids.

L2 ANSWER 6 OF 10 USPATFULL
AN 2001:147690 USPATFULL
TI Substitutes for modified starch and latexes in paper manufacture
IN Nichols, Scott E., Johnston, IA, United States
PA Pioneer Hi-Bred International, Inc., Des Moines, IA, United States (U.S. corporation)
PI US 6284479 B1 20010904

AI US 1998-210361 19981211 (9)
RLI Continuation-in-part of Ser. No. US 1998-8172, filed on 16 Jan 1998 Division of Ser. No. US 1995-482711, filed on 7 Jun 1995, now abandoned Continuation-in-part of Ser. No. US 1998-9620, filed on 20 Jan 1998 Continuation of Ser. No. US 1995-485243, filed on 7 Jun 1995, now patented, Pat. No. US 5712107 Continuation-in-part of Ser. No. US 1998-7999, filed on 16 Jan 1998 Division of Ser. No. US 1995-478704, filed on 7 Jun 1995, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Leary, Louise N.
LREP Pioneer Hi-Bred International, Inc.
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1789
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides methods of making paper, utilizing glucans, produced by the glucosyltransferase B, C or D enzyme of the species Streptococcus mutans, instead of modified starches. The present glucans are functionally similar to currently utilized modified starches and are particularly useful in the coating step of paper manufacture. The present glucans also exhibit thermoplastic properties and impart gloss to the paper during the coating step.

L2 ANSWER 7 OF 10 USPATFULL
AN 2001:117241 USPATFULL
TI Pyruvate dehydrogenase kinase polynucleotides, polypeptides and uses thereof
IN Randall, Douglas D., Columbia, MO, United States
Thelen, Jay J., Columbia, MO, United States
Miernyk, Jan A., Peoria, IL, United States
Muszynski, Michael G., Des Moines, IA, United States
Sewalt, Vincent J. H., West Des Moines, IA, United States
PA Pioneer Hi-Bred International, Inc., Des Moines, IA, United States (U.S. corporation)
University of Missouri, Columbia, MO, United States (U.S. corporation)
PI US 6265636 B1 20010724
AI US 1999-333423 19990615 (9)
PRAI US 1998-89998P 19980619 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Fox, David T.; Assistant Examiner: Ibrahim, Medina A.
LREP Pioneer Hi-Bred International, Inc.
CLMN Number of Claims: 52
ECL Exemplary Claim: 12,19
DRWN No Drawings
LN.CNT 3517
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides methods and compositions relating to altering carbohydrate metabolism and/or composition of plants. The invention provides isolated nucleic acids and their encoded proteins, expression cassettes, host cells, transgenic plants, and antibody compositions.

L2 ANSWER 8 OF 10 USPATFULL
AN 2001:48312 USPATFULL
TI Hm2 cDNA from maize encoding disease resistance polypeptide

IN Briggs, Steven P., DelMar, CA, United States
Johal, Gurmukh, Columbia, MO, United States
Multani, Dilbag Singh, Columbia, MO, United States
PA Pioneer Hi-Bred International, Inc., Des Moines, IA, United States (U.S. corporation)
The Curators of the University of Missouri, Columbia, MO, United States (U.S. corporation)
PI US 6211440 B1 20010403
AI US 1999-231227 19990114 (9)
PRAI US 1998-71684P 19980116 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Nelson, Amy J.
LREP Pioneer Hi-Bred International, Inc.
CLMN Number of Claims: 14
ECL Exemplary Claim: 2
DRWN No Drawings
LN.CNT 3025
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides isolated Hm2 nucleic acids. The invention further provides expression cassettes, transferred host cells, and transgenic plants. Also, the invention provides methods of imparting disease resistance to plants susceptible to fungal pathogens, which utilize cyclic tetrapeptide toxins.

L2 ANSWER 9 OF 10 USPATFULL
AN 2001:29788 USPATFULL
TI Alteration of hemicellulose concentration in plants
IN Dhugga, Kanwarpal S., Johnston, IA, United States
Nichols, Scott E., Johnston, IA, United States
Fallis, Patricia Lynne, Polk City, IA, United States
PA Pioneer Hi-Bred International, Inc., Des Moines, IA, United States (U.S. corporation)
PI US 6194638 B1 20010227
AI US 1999-338671 19990622 (9)
PRAI US 1998-90416P 19980623 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Fox, David T.; Assistant Examiner: Ibrahim, Medina A
LREP Pioneer Hi-Bred International, Inc.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1,11
DRWN No Drawings
LN.CNT 3616
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides isolated Rgp nucleic acids and their encoded proteins. The present invention provides methods and compositions relating to altering RGP levels in plants. The invention further provides recombinant expression cassettes, host cells, transgenic plants, and antibody compositions.

L2 ANSWER 10 OF 10 USPATFULL
AN 2001:17988 USPATFULL
TI Recombinant bacterial phytases and uses thereof
IN Short, Jay M., Rancho Santa Fe, CA, United States
Kretz, Keith A., San Marcos, CA, United States
PA Diversa Corporation, San Diego, CA, United States (U.S. corporation)

PI US 6183740 B1 20010206
AI US 1999-318528 19990525 (9)
RLI Continuation-in-part of Ser. No. US 1999-291931, filed on 13 Apr 1999 Continuation of Ser. No. US 1999-259214, filed on 1 Mar 1999, now patented, Pat. No. US 6110719 Division of Ser. No. US 1997-910798, filed on 13 Aug 1997, now patented, Pat. No. US 5876997
DT Utility
FS Granted
EXNAM Primary Examiner: Achutamurthy, Ponnathapu; Assistant Examiner: Tung, Peter
LREP Gray Cary Ware & Freidenrich LLP, Haile, Lisa A.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2800
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A purified recombinant phytase enzyme derived from Escherichia coli B. The enzyme has a molecular weight of about 47.1 kilodaltons and has phytase activity (SEQ ID NO:2). The enzyme can be produced from native or recombinant host cells and can be used to aid in the digestion of phytate where desired. In particular, the phytase of the present invention can be used in foodstuffs to improve the feeding value of phytate rich ingredients.

=> file medline biosis embase scisearch wpids uspatful cancerlit

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 21.44 | 23.12 |

FILE 'MEDLINE' ENTERED AT 16:26:36 ON 03 APR 2002

FILE 'BIOSIS' ENTERED AT 16:26:36 ON 03 APR 2002
COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'EMBASE' ENTERED AT 16:26:36 ON 03 APR 2002
COPYRIGHT (C) 2002 Elsevier Science B.V. All rights reserved.

FILE 'SCISEARCH' ENTERED AT 16:26:36 ON 03 APR 2002
COPYRIGHT (C) 2002 Institute for Scientific Information (ISI) (R)

FILE 'WPIDS' ENTERED AT 16:26:36 ON 03 APR 2002
COPYRIGHT (C) 2002 DERWENT INFORMATION LTD

FILE 'USPATFULL' ENTERED AT 16:26:36 ON 03 APR 2002
CA INDEXING COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'CANCERLIT' ENTERED AT 16:26:36 ON 03 APR 2002

=> s vaccine and (self-antigen0
UNMATCHED LEFT PARENTHESIS 'AND (SELF-ANTIG'
The number of right parentheses in a query must be equal to the number of left parentheses.

=> s vaccine and (self-antigen)
L3 210 VACCINE AND (SELF-ANTIGEN)

```
=> s l3(10a)(transformed or transfected)
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L3 (10A)(TRANSFORM'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L4 (10A)(TRANSFORM'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L5 (10A)(TRANSFORM'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L6 (10A)(TRANSFORM'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L7 (10A)(TRANSFORM'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L8 (10A)(TRANSFORM'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L9 (10A)(TRANSFORM'
L4          67 L3(10A)(TRANSFORMED OR TRANSFECTED)

=> s l3 and (transformed cells)
L5          18 L3 AND (TRANSFORMED CELLS)

=> s l3 and (tranfected cell!)
L6           0 L3 AND (TRANFECTED CELL!)

=> s l3 and (transfected cell!)
L7          19 L3 AND (TRANSFECTED CELL!)

=> s l5 or l7
L8          34 L5 OR L7

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9           34 DUP REM L8 (0 DUPLICATES REMOVED)

=> d l9 1-34 bib ab

L9   ANSWER 1 OF 34  USPATFULL
AN     2002:67349  USPATFULL
TI     Coupling of peripheral tolerance to endogenous IL-10 promotes effective
       modulation of T cells and ameliorates autoimmune disease
IN     Zaghouani, Habib, Columbia, MO, UNITED STATES
PI     US 2002038002      A1   20020328
AI     US 2001-873901     A1   20010604 (9)
PRAI   US 2000-209527P     20000605 (60)
DT     Utility
FS     APPLICATION
LREP   KNOBBE MARTENS OLSON & BEAR LLP, 620 NEWPORT CENTER DRIVE, SIXTEENTH
       FLOOR, NEWPORT BEACH, CA, 92660
CLMN   Number of Claims: 65
ECL    Exemplary Claim: 1
DRWN   45 Drawing Page(s)
LN.CNT 4140
AB     Immunomodulating agents comprising at least one Fc receptor ligand and
       at least one immunosuppressive factor are provided as are methods for
       their manufacture and use. The immunomodulating agents may be in the
       form of polypeptides or chimeric antibodies and preferably incorporate
       an immunosuppressive factor comprising a T cell receptor agonist or
       antagonist. The compounds and compositions of the invention may be used
```

to selectively suppress the immune system to treat symptoms associated with immune disorders such as allergies, transplanted tissue rejection and autoimmune disorders including autoimmune diabetes, rheumatoid arthritis and multiple sclerosis.

L9 ANSWER 2 OF 34 USPATFULL
AN 2002:16589 USPATFULL
TI Presentation of hydrophobic antigens to T-cells by CD1 molecules
IN Porcelli, Steven A., Bronx, NY, UNITED STATES
Brenner, Michael B., Newton, MA, UNITED STATES
Beckman, Evan M., Sudbury, MA, UNITED STATES
Furlong, Stephen T., Wilmington, DE, UNITED STATES
PI US 2002009465 A1 20020124
AI US 2001-861963 A1 20010521 (9)
RLI Division of Ser. No. US 1995-501600, filed on 12 Jul 1995, GRANTED, Pat. No. US 6238676 Continuation-in-part of Ser. No. US 1994-322980, filed on 13 Oct 1994, GRANTED, Pat. No. US 5679347 Continuation-in-part of Ser. No. WO 1994-US6991, filed on 21 Jun 1994, UNKNOWN Continuation-in-part of Ser. No. US 1993-80072, filed on 21 Jun 1993, ABANDONED Continuation-in-part of Ser. No. US 1992-989790, filed on 10 Dec 1992, UNKNOWN
DT Utility
FS APPLICATION
LREP Elizabeth R. Plumer, Wolf, Greenfield & Sacks, P.C., Federal Reserve Plaza, 600 Atlantic Avenue, Boston, MA, 02210
CLMN Number of Claims: 34
ECL Exemplary Claim: 1
DRWN 36 Drawing Page(s)
LN.CNT 2548
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Provided are CD-1 presented antigens, compositions, cells, inhibitors and methods relating to the use of hydrophobic antigen presentation by CD1 molecules, including:

methods for detecting the presence of a CD1-presented hydrophobic antigen in a sample;

methods for isolating such CD1-presented antigens and the isolated antigens;

vaccines containing CD1-presented antigens and vaccination methods;

methods of blocking CD1 antigen presentation;

methods of identifying and/or isolating CD1 blocking agents and the isolated CD1 blocking agents;

methods of inducing CD1 expression; and

T-cells for use in the methods disclosed herein.

L9 ANSWER 3 OF 34 USPATFULL
AN 2002:69599 USPATFULL
TI Cellular immunogens comprising cognate proto-oxogenes
IN Halpern, Michael S, West Newton, MA, United States
England, James M, Media, PA, United States
PA Philadelphia Health and Educational Corporation, Philadelphia, PA,

United States (U.S. corporation)
PI US 6365151 B1 20020402
AI US 1998-167322 19981007 (9)
RLI Continuation-in-part of Ser. No. US 1998-101226, filed on 2 Jul 1998, now abandoned Continuation-in-part of Ser. No. WO 1997-US582, filed on 13 Jan 1997
PRAI US 1996-10262P 19960119 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Hauda, Karen M.; Assistant Examiner: Beckerleg, Anne-Marie S
LREP Drinker Biddle & Keath LLP
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1838
AB A cellular immunogen is provided for immunizing a host against the effects of the product of a target proto-oncogene, where the overexpression of the target proto-oncogene is associated with a malignancy. The cellular immunogen comprises host cells which have been transfected with at least one transgene construct comprising a transgene cognate to the target proto-oncogene and a strong promoter to drive the expression of the transgene in the ***transfected*** ***cells*** . The transgene encodes a gene product which induces host immunoreactivity to host self-determinants of the product of the target proto-oncogene gene. The transgene may comprise, for example, wild-type or mutant retroviral oncogene DNA cognate to the target proto-oncogene; or wild-type or mutant proto-oncogene DNA of a species different from the host species. The cellular immunogen may be prepared from biopsied host cells, e.g. skin fibroblasts, which are stably or transiently transfected with the transgene construct containing the cognate transgene. The host cells transfected with the cognate transgene construct, are then returned to the body of the host to obtain expression of the cognate transgene in the host.

L9 ANSWER 4 OF 34 USPATFULL
AN 2001:233136 USPATFULL
TI Novel amphipathic aldehydes and their uses as adjuvants and immunoeffectors
IN Johnson, David A., Hamilton, MT, United States
PI US 2001053363 A1 20011220
AI US 2001-810915 A1 20010316 (9)
PRAI US 2000-190466P 20000317 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 47
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2531
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to novel aldehyde containing compounds and their uses as adjuvants and immunoeffectors.

L9 ANSWER 5 OF 34 USPATFULL
AN 2001:218004 USPATFULL

TI Cell surface molecule-induced macrophage activation
IN Tao, Weng, Lincoln, RI, United States
Wong, Shou, Cumberland, RI, United States
Hickey, William F., Lyme, NH, United States
Hammang, Joseph P., Barrington, RI, United States
Baetge, E. Edward, St. Sulpice, Switzerland
PI US 2001046490 A1 20011129
AI US 2001-761413 A1 20010116 (9)
RLI Continuation of Ser. No. US 2000-562544, filed on 2 May 2000, GRANTED, Pat. No. US 6225448 Division of Ser. No. US 1998-178869, filed on 26 Oct 1998, GRANTED, Pat. No. US 6197294
DT Utility
FS APPLICATION
LREP IVOR R. ELRIFI, Esq., Attorneys for Applicants, c/o MINTZ LEVIN, One Financial Center, Boston, MA, 02111
CLMN Number of Claims: 34
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 1527
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides cells containing recombinant polynucleotides coding for cell surface molecules that, when expressed in the cell, result in rejection of the cell by the host immune system. The invention also provides methods of using such cells, and capsules for delivery of biologically active molecules to a patient.

L9 ANSWER 6 OF 34 USPATFULL
AN 2001:194124 USPATFULL
TI Combinatorial enzymatic complexes
IN Nolan, Garry P., Menlo Park, CA, United States
Payan, Donald, Hillsborough, CA, United States
PA Rigel Pharmaceuticals, Inc. (U.S. corporation)
PI US 2001036638 A1 20011101
AI US 2001-789652 A1 20010220 (9)
RLI Division of Ser. No. US 1997-873601, filed on 12 Jun 1997, PENDING
DT Utility
FS APPLICATION
LREP FLEHR HOHBACH TEST, ALBRITTON & HERBERT LLP, Suite 3400, Four Embarcadero Center, San Francisco, CA, 94111-4187
CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 2249
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the formation of novel in vivo combinatorial enzyme complexes for use in screening candidate drug agents for bioactivity.

L9 ANSWER 7 OF 34 USPATFULL
AN 2001:139156 USPATFULL
TI T cell receptor ligands and methods of using same
IN Germain, Ronald N., Potomac, MD, United States
Racioppi, Luigi, Naples, Italy
Ronchese-Le Gros, Franca, Wellington, New Zealand
PI US 2001016198 A1 20010823
AI US 2001-776520 A1 20010202 (9)
RLI Continuation of Ser. No. US 1999-293738, filed on 16 Apr 1999, ABANDONED

Continuation of Ser. No. US 1997-858248, filed on 19 May 1997, GRANTED, Pat. No. US 5948409 Division of Ser. No. US 1993-4936, filed on 15 Jan 1993, GRANTED, Pat. No. US 5837477
DT Utility
FS APPLICATION
LREP KNOBBE MARTENS OLSON & BEAR LLP, 620 NEWPORT CENTER DRIVE, SIXTEENTH FLOOR, NEWPORT BEACH, CA, 92660
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 1255
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention concerns TCR ligands with immunomodulatory properties, as well as methods of identifying such ligands and of using such ligands to modulate T cell effector responses.

L9 ANSWER 8 OF 34 USPATFULL
AN 2001:91501 USPATFULL
TI Green fluorescent protein fusions with random peptides
IN Anderson, David, San Bruno, CA, United States
Bogenberger, Jakob Maria, Menlo Park, CA, United States
PA Rigel Pharmaceuticals, Inc. (U.S. corporation)
PI US 2001003650 A1 20010614
AI US 2000-749959 A1 20001227 (9)
RLI Continuation of Ser. No. US 1998-169015, filed on 8 Oct 1998, GRANTED, Pat. No. US 6180343
DT Utility
FS APPLICATION
LREP Robin M. Silva, FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP, Suite 3400, Four Embarcadero Center, San Francisco, CA, 94111-4187
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 3 Drawing Page(s)
LN.CNT 2537
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the use of fluorescent proteins, particularly green fluorescent protein (GFP), in fusion constructs with random and defined peptides and peptide libraries, to increase the cellular expression levels, decrease the cellular catabolism, increase the conformational stability relative to linear peptides, and to increase the steady state concentrations of the random peptides and random peptide library members expressed in cells for the purpose of detecting the presence of the peptides and screening random peptide libraries. N-terminal, C-terminal, dual N- and C-terminal and one or more internal fusions are all contemplated. Novel fusions utilizing self-binding peptides to create a conformationally stabilized fusion domain are also contemplated.

L9 ANSWER 9 OF 34 USPATFULL
AN 2001:157795 USPATFULL
TI Anti-IgE antibodies and method of improving polypeptides
IN Lowman, Henry B., 400 San Juan Ave., El Granada, CA, United States 94018
Presta, Leonard G., 1900 Gough St. #206, San Francisco, CA, United States 94109
Jardieu, Paula M., 33 Hayward Ave. #110, San Mateo, CA, United States 94401-4319

Lowe, John, 396 Michelle La., Daly City, CA, United States 94080
PI US 6290957 B1 20010918
AI US 1999-296005 19990421 (9)
RLI Continuation of Ser. No. US 1997-887352, filed on 2 Jul 1997, now patented, Pat. No. US 5994511
DT Utility
FS GRANTED
EXNAM Primary Examiner: Saunders, David
LREP Svoboda, Craig G.
CLMN Number of Claims: 19
ECL Exemplary Claim: 1
DRWN 21 Drawing Figure(s); 19 Drawing Page(s)
LN.CNT 4910
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a method for adjusting the affuinity of a polypeptide to a target molecule by a combination of steps, including: (1) the identification of aspartyl residues which are prone to isomerization; (2) the substitution of alternative residues and screening the resulting mutants for affinity against the target molecule. In a preferred embodiment, the method of subtituting residues is affinity maturation with phage display (AMPD). In a further preferred embodiment the polypeptide is an antibody and the target molecule is an antigen. In a further preferred embodiment, the antibody is anti-IgE and the target molecule is IgE. In another embodiment, the invention relates to an anti-IgE antibody having improved affinity to IgE.

L9 ANSWER 10 OF 34 USPATFULL
AN 2001:125564 USPATFULL
TI Melanoma antigens and their use in diagnostic and therapeutic methods
IN Kawakami, Yutaka, Rockville, MD, United States
Rosenberg, Steven A., Potomac, MD, United States
PA The United States of America as represented by the Department of Health and Human Services, Rockville, MD, United States (U.S. government)
PI US 6270778 B1 20010807
AI US 1999-267439 19990312 (9)
RLI Division of Ser. No. US 1998-73138, filed on 5 May 1998 Continuation-in-part of Ser. No. US 1995-417174, filed on 5 Apr 1995, now patented, Pat. No. US 5844075 Continuation-in-part of Ser. No. US 1994-231565, filed on 22 Apr 1994, now patented, Pat. No. US 5874560
DT Utility
FS GRANTED
EXNAM Primary Examiner: Huff, Sheela
LREP Morgan & Finnegan, L.L.P., Feiler, William S., Auth, Dorothy R.
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 3383
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a nucleic acid sequence encoding a melanoma antigen recognized by T lymphocytes, designated MART-1. This invention further relates to bioassays using the nucleic acid sequence, protein or antibodies of this invention to diagnose, assess or prognoses a mammal afflicted with melanoma or metastata melanoma. This invention also provides immunogenic peptides derived from the MART-1 melanoma antigen and a second melanoma antigen designated gp100. This invention further provides immunogenic peptides derived from the MART-1 melanoma antigen or gp100 antigen which have been modified to enhance their

immunogenicity. The proteins and peptides provided can serve as an immunogen or ***vaccine*** to prevent or treat melanoma.

L9 ANSWER 11 OF 34 USPATFULL
AN 2001:82751 USPATFULL
TI Induction of immune response to antigens expressed by recombinant adeno-associated virus
IN Kurtzman, Gary J., Menlo Park, CA, United States
Engelman, Edgar G., Atherton, CA, United States
Podsakoff, Greg M., Fullerton, CA, United States
Brockstedt, Dirk G., Palo Alto, CA, United States
PA Avigen, Inc., CA, United States (U.S. corporation)
PI US 6242426 B1 20010605
AI US 1998-121162 19980723 (9)
PRAI US 1997-53733P 19970725 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Hauda, Karen M.; Assistant Examiner: Beckerleg, Anne Marie S
LREP Madson & Metcalf, Chahine, Kenneth G., Thomson, Christina
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 2301
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates generally to immunization methods using recombinant viral vectors. In particular, the invention relates to methods and compositions for immunizing a subject with a nucleic acid molecule encoding an antigen of interest, wherein the nucleic acid molecule is delivered to the subject via a recombinant AAV virion.

L9 ANSWER 12 OF 34 USPATFULL
AN 2001:78703 USPATFULL
TI Presentation of hydrophobic antigens to T-cells by CD1 molecules
IN Porcelli, Steven A., Bronx, NY, United States
Brenner, Michael B., Newton, MA, United States
Beckman, Evan M., Sudbury, MA, United States
Furlong, Stephen T., Wilmington, DE, United States
PA Brigham and Women's Hospital, Boston, MA, United States (U.S. corporation)
PI US 6238676 B1 20010529
AI US 1995-501600 19950712 (8)
RLI Continuation-in-part of Ser. No. US 1994-322980, filed on 13 Oct 1994, now patented, Pat. No. US 5679347 Continuation of Ser. No. US 1994-322979, filed on 13 Oct 1994, now patented, Pat. No. US 5853737 Continuation-in-part of Ser. No. WO 1994-US6991, filed on 21 Jun 1994 Continuation-in-part of Ser. No. US 1993-80072, filed on 21 Jun 1993, now abandoned Continuation-in-part of Ser. No. US 1992-989790, filed on 10 Dec 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Chan, Christina Y.; Assistant Examiner: DiBrino, Marianne
LREP Wolf, Greenfield & Sacks, PC
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 63 Drawing Figure(s); 36 Drawing Page(s)

LN.CNT 2851
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Provided are CD-1 presented antigens, compositions, cells, inhibitors and methods relating to the use of hydrophobic antigen presentation by CD1 molecules, including:

methods for detecting the presence of a CD1-presented hydrophobic antigen in a sample;

methods for isolating such CD1-presented antigens and the isolated antigens;

vaccines containing CD1-presented antigens and vaccination methods;

methods of blocking CD1 antigen presentation;

methods of identifying and/or isolating CD1 blocking agents and the isolated CD1 blocking agents;

methods of inducing CD1 expression; and

T-cells for use in the methods disclosed.

L9 ANSWER 13 OF 34 USPATFULL
AN 2001:78697 USPATFULL
TI Compositions and methods employing a ligand for CD21 or CD19 for modulating the immune response to an antigen
IN Fearon, Douglas T., Cambridge, United Kingdom
Dempsey, Paul W., Cambridge, United Kingdom
PA Cambridge University Technical Services Limited, Cambridge, United Kingdom (non-U.S. corporation)
PI US 6238670 B1 20010529
WO 9617625 19960613
AI US 1997-849488 19971021 (8)
WO 1995-GB2851 19951206
19971021 PCT 371 date
19971021 PCT 102(e) date
PRAI GB 1994-24631 19941206
DT Utility
FS Granted
EXNAM Primary Examiner: Saunders, David; Assistant Examiner: DeCloux, Amy
LREP Flehr Hohbach Test Albritton & Herbert LLP, Trecartin, Richard F.
CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 1084
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Described herein are compositions which modulate the immune response. In one aspect, a composition is described which comprises an antigen covalently linked to a ligand for CD21(CR2) or CD19. This antigen is not associated with a complement C3 fragment through an ester bond derived from the internal thioester of the complement C3 fragment.

L9 ANSWER 14 OF 34 USPATFULL
AN 2001:63825 USPATFULL
TI 1gG /transferrin receptor fusion protein
IN Tao, Weng, Lincoln, RI, United States

Wong, Shou, Cumberland, RI, United States
Hickey, William F., Lyme, NH, United States
Hammang, Joseph P., Barrington, RI, United States
Baetge, E. Edward, St. Sulpice, Switzerland
PA Neurotech S.A., Evry, France (non-U.S. corporation)
PI US 6225448 B1 20010501
AI US 2000-562544 20000502 (9)
RLI Division of Ser. No. US 1998-178869, filed on 26 Oct 1998
DT Utility
FS Granted
EXNAM Primary Examiner: Clark, Deborah J. R.; Assistant Examiner: Wilson, Michael C
LREP Mints, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 1389
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides cells containing recombinant polynucleotides coding for cell surface molecules that, when expressed in the cell, result in rejection of the cell by the host immune system. The invention also provides methods of using such cells, and capsules for delivery of biologically active molecules to a patient.

L9 ANSWER 15 OF 34 USPATFULL
AN 2001:32792 USPATFULL
TI Cell surface molecule-induced macrophage activation
IN Tao, Weng, Lincoln, RI, United States
Wong, Shou, Cumberland, RI, United States
Hickey, William F., Lyme, NH, United States
Hammang, Joseph P., Barrington, RI, United States
Baetge, E. Edward, St. Sulpice, Switzerland
PA Neurotech S.A., Evry, France (non-U.S. corporation)
PI US 6197294 B1 20010306
AI US 1998-178869 19981026 (9)
DT Utility
FS Granted
EXNAM Primary Examiner: LeGuyader, John L.; Assistant Examiner: Wilson, Michael C.
LREP Mintz,Levin,Cohn,Ferris, Glovsky and Popeo, P.C., Elrifi, Ivor R., Prince, John
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 1400
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides cells containing recombinant polynucleotides coding for cell surface molecules that, when expressed in the cell, result in rejection of the cell by the host immune system. The invention also provides methods of using such cells, and capsules for delivery of biologically active molecules to a patient.

L9 ANSWER 16 OF 34 USPATFULL
AN 2001:14201 USPATFULL
TI Green fluorescent protein fusions with random peptides
IN Anderson, David, San Bruno, CA, United States
Bogenberger, Jakob Maria, Menlo Park, CA, United States

PA Rigel Pharmaceuticals, Inc., S. San Francisco, CA, United States (U.S. corporation)
PI US 6180343 B1 20010130
AI US 1998-169015 19981008 (9)
DT Utility
FS Granted
EXNAM Primary Examiner: Brusca, John S.
LREP Flehr Hohbach Test Albritton & Herbert LLP
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 7 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 2522
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the use of fluorescent proteins, particularly green fluorescent protein (GFP), in fusion constructs with random and defined peptides and peptide libraries, to increase the cellular expression levels, decrease the cellular catabolism, increase the conformational stability relative to linear peptides, and to increase the steady state concentrations of the random peptides and random peptide library members expressed in cells for the purpose of detecting the presence of the peptides and screening random peptide libraries. N-terminal, C-terminal, dual N- and C-terminal and one or more internal fusions are all contemplated. Novel fusions utilizing self-binding peptides to create a conformationally stabilized fusion domain are also contemplated.

L9 ANSWER 17 OF 34 USPATFULL
AN 2001:4887 USPATFULL
TI Anti-IgE antibodies and method of improving polypeptides
IN Lowman, Henry B., El Granada, CA, United States
Presta, Leonard G., San Francisco, CA, United States
Jardieu, Paula M., San Mateo, CA, United States
Lowe, John, Daly City, CA, United States
PA Genentech, Inc., South San Francisco, CA, United States (U.S. corporation)
PI US 6172213 B1 20010109
AI US 1998-109207 19980630 (9)
PRAI US 1997-51554P 19970702 (60)
DT Patent
FS Granted
EXNAM Primary Examiner: Chan, Christina Y.; Assistant Examiner: Ewoldt, Gerald R.
LREP Svoboda, Craig G.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 23 Drawing Figure(s); 19 Drawing Page(s)
LN.CNT 4829
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a method for adjusting the affinity of a polypeptide to a target molecule by a combination of steps, including: (1) the identification of aspartyl residues which are prone to isomerization; (2) the substitution of alternative residues and screening the resulting mutants for affinity against the target molecule. In a preferred embodiment, the method of substituting residues is affinity maturation with phage display (AMPD). In a further preferred embodiment the polypeptide is an antibody and the target molecule is an antigen. In a further preferred embodiment, the antibody is anti-IgE and

the target molecule is IgE. In another embodiment, the invention relates to an anti-IgE antibody having improved affinity to IgE.

L9 ANSWER 18 OF 34 USPATFULL
AN 2000:160777 USPATFULL
TI Methods for screening for transdominant intracellular effector peptides and RNA molecules
IN Nolan, Garry P., Palo Alto, CA, United States
Rothenberg, S. Michael, Palo Alto, CA, United States
PA Rigel Pharmaceuticals, Inc., Sunnyvale, CA, United States (U.S. corporation)
The Board of Trustees for the Leland Stanford Junior University, Palo Alto, CA, United States (U.S. corporation)
PI US 6153380 20001128
AI US 1997-789333 19970123 (8)
RLI Continuation of Ser. No. US 1996-589108, filed on 23 Jan 1996, now abandoned And a continuation of Ser. No. US 1996-589911, filed on 23 Jan 1996, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Chan, Christina Y.; Assistant Examiner: VanderVegt, F. Pierre
LREP Flehr Hohbach Test Albritton & Herbert LLP, Silva, Robin M.
CLMN Number of Claims: 27
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 4104
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions for screening for intracellular transdominant effector peptides and RNA molecules selected inside living cells from randomized pools are provided.

L9 ANSWER 19 OF 34 USPATFULL
AN 2000:156961 USPATFULL
TI Antigen presenting cells of the adipocyte lineage
IN Mosca, Joseph D., Ellicott City, MD, United States
PA Osiris Therapeutics, Inc., Baltimore, MD, United States (U.S. corporation)
PI US 6149906 20001121
AI US 1998-157008 19980918 (9)
PRAI US 1997-59690P 19970920 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Chan, Christina Y.; Assistant Examiner: Ewoldt, Gerald R.
LREP Olstein, Elliot M., Lillie, Raymond J.
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 915
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed is a mesenchymal stem cell and/or cell of the adipocyte lineage that (i) has been modified to have at least one exogenous antigen bound to at least one primary surface molecule of said cell such that said at least one antigen can initiate an immune response and (ii) also expresses at least one co-stimulatory molecule. The antigen is preferably a protein, polypeptide, lipid or glycolipid. The primary

surface molecule is MHC I, MHC II or CD1. Also disclosed is a method for stimulating presentation of at least one exogenous antigen fragment on a mesenchymal stem cell primary surface molecule by contacting a mesenchymal stem cell that is capable of expressing at least one co-stimulatory molecule with (i) an exogenous antigen or (ii) genetic material that codes for the exogenous antigen which the mesenchymal stem cell processes into it least one antigen fragment. The method can further include contacting the mesenchymal stem cell with interferon-.gamma.. Also disclosed are a method for determining the state of activation of a T lymphocyte population and a method for the treatment or prevention of a disease in an animal.

L9 ANSWER 20 OF 34 USPATFULL
AN 1999:155894 USPATFULL
TI Anti-IgE antibodies and methods of improving polypeptides
IN Lowman, Henry B., El Granada, CA, United States
Presta, Leonard G., San Francisco, CA, United States
Jardieu, Paula M., San Mateo, CA, United States
Lowe, John, Daly City, CA, United States
PA Genentech, Inc., South San Francisco, CA, United States (U.S. corporation)
PI US 5994511 19991130
AI US 1997-887352 19970702 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Saunders, David
LREP Svoboda, Craig G.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 21 Drawing Figure(s); 19 Drawing Page(s)
LN.CNT 5816
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a method for adjusting the affinity of a polypeptide to a target molecule by a combination of steps, including: (1) the identification of aspartyl residues which are prone to isomerization; (2) the substitution of alternative residues and screening the resulting mutants for affinity against the target molecule. In a preferred embodiment, the method of subtituting residues is affinity maturation with phage display (AMPD). In a further preferred embodiment the polypeptide is an antibody and the target molecule is an antigen. In a further preferred embodiment, the antibody is anti-IgE and the target molecule is IgE. In another embodiment, the invention relates to an anti-IgE antibody having improved affinity to IgE.

L9 ANSWER 21 OF 34 USPATFULL
AN 1999:121222 USPATFULL
TI Engineered antigen presenting cells and methods for their use
IN Robinson, William S., Burlingame, CA, United States
PA Leland Stanford Junior University, Palo Alto, CA, United States (U.S. corporation)
PI US 5962320 19991005
AI US 1997-888360 19970703 (8)
RLI Continuation-in-part of Ser. No. US 663157
DT Utility
FS Granted
EXNAM Primary Examiner: Railey, II, Johnny F.
LREP Pennie & Edmonds LLP

CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1364
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Autologous, heterologous or xenogeneic primary cells or cell lines are genetically modified ex vivo to render the cells capable of processing and presenting selected antigens to cells of the immune system of a subject, and to express different HLA molecules for matching to the HLA specificity of the subject. The cells are also modified to express immunoregulatory molecules for directing the immune response of the subject. The cells and cell lines are used in methods to treat infectious diseases or cancer, or to prevent infectious disease by inoculation into a host to activate T cells and induce an antigen-specific immune response, and in assays of the cytolytic activity of a subject's T cells. The cells can also be used to suppress an unwanted immune response of a subject to a selected antigen where the cells lack expression of a costimulation molecule needed for T cell activation.

L9 ANSWER 22 OF 34 USPATFULL
AN 1999:117284 USPATFULL
TI T-cell receptor ligands and methods of using same
IN Germain, Ronald N., Potomac, MD, United States
Racioppi, Luigi, Bethesda, MD, United States
PA The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)
PI US 5958712 19990928
AI US 1997-858825 19970519 (8)
RLI Division of Ser. No. US 1993-4936, filed on 15 Jan 1993, now patented, Pat. No. US 5837477
DT Utility
FS Granted
EXNAM Primary Examiner: Saunders, David
LREP Knobbe Martens Olson & Bear, LLP
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 18 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 1358
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention concerns TCR ligands with immunomodulatory properties, as well as methods of identifying such ligands and of using such ligands to modulate T cell effector responses.

L9 ANSWER 23 OF 34 USPATFULL
AN 1999:106089 USPATFULL
TI T cell receptor ligands and methods of using same
IN Germain, Ronald N., Potomac, MD, United States
Racioppi, Luigi, Bethesda, MD, United States
PA The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)
PI US 5948409 19990907
AI US 1997-858248 19970519 (8)
RLI Division of Ser. No. US 1993-4936, filed on 15 Jan 1993, now patented, Pat. No. US 5837477
DT Utility
FS Granted

EXNAM Primary Examiner: Saunders, David
LREP Knobbe Martens Olson & Bear, LLP
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 18 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 1337
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention concerns TCR ligands with immunomodulatory properties, as well as methods of identifying such ligands and of using such ligands to modulate T cell effector responses.

L9 ANSWER 24 OF 34 USPATFULL
AN 1999:96476 USPATFULL
TI Methods of treating inflammation and compositions therefor
IN McFadden, D. Grant, Edmonton, Canada
Lucas, Alexandra, Edmonton, Canada
PA Viron Therapeutics, Inc., London, Canada (non-U.S. corporation)
PI US 5939525 19990817
AI US 1995-411043 19950327 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Delaney, Patrick R.
LREP Scully, Scott, Murphy & Presser
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 23 Drawing Figure(s); 15 Drawing Page(s)
LN.CNT 2356
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions and methods for treating inflammatory cell infiltration in a tissue of a mammalian subject are provided. The method involves administering a therapeutically effective amount of SERP-1, SERP-1 analog or biologically active fragment thereof admixed with a pharmaceutically acceptable carrier to a subject in need of such treatment. Biologically active SERP-1 analogs are also provided. The compositions and methods of the present invention are useful for treating numerous inflammatory based diseases and injuries.

L9 ANSWER 25 OF 34 USPATFULL
AN 1999:92298 USPATFULL
TI AIDS therapy and ***vaccine***
IN Habeshaw, John Anthony, Harpenden, United Kingdom
Dalgleish, Angus George, London, United Kingdom
Hounsell, Elizabeth, Isleworth, United Kingdom
Bountiff, Lynne, Aylebury, United Kingdom
PA Retroscreen Limited, Whitechapel, United Kingdom (non-U.S. corporation)
PI US 5935579 19990810
AI US 1994-323686 19941014 (8)
RLI Continuation of Ser. No. US 1991-766366, filed on 25 Sep 1991, now abandoned
PRAI GB 1990-20999 19900925
GB 1990-22330 19901015
GB 1991-6540 19910327
DT Utility
FS Granted
EXNAM Primary Examiner: Eisenschenk, Frank C.; Assistant Examiner: Nelson, Brett

LREP Hale and Dorr LLP
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 3135
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides therapy and prophylaxis against HIV-induced AIDS, as well as methods for ascertaining the susceptibility of an individual to HIV-induced AIDS, the invention being based on the discovery that AIDS results from gp120 of HIV mimicking the antigen-presenting component of the immune system, thereby spuriously activating certain CD4+ T cells in susceptible individuals, leading to a condition similar to graft versus host disease, the condition being treatable by eliminating the responsible T cells, for example.

L9 ANSWER 26 OF 34 USPATFULL
AN 1999:72706 USPATFULL
TI Methods of treating inflammation and compositions therefor
IN McFadden, D. Grant, Edmonton, Canada
Lucas, Alexandra, Edmonton, Canada
PA Viron Therapeutics, Inc., London, Canada (non-U.S. corporation)
PI US 5917014 19990629
AI US 1995-468865 19950606 (8)
RLI Continuation of Ser. No. US 1995-411043, filed on 27 Mar 1995
DT Utility
FS Granted
EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Delaney, Patrick R.
LREP Scully, Scott, Murphy & Presser
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 23 Drawing Figure(s); 15 Drawing Page(s)
LN.CNT 2074
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions and methods for treating inflammatory cell infiltration in a tissue of a mammalian subject are provided. The method involves administering a therapeutically effective amount of SERP-1, SERP-1 analog or biologically active fragment thereof admixed with a pharmaceutically acceptable carrier to a subject in need of such treatment. Biologically active SERP-1 analogs are also provided. The compositions and methods of the present invention are useful for treating numerous inflammatory based diseases and injuries.

L9 ANSWER 27 OF 34 USPATFULL
AN 1999:24776 USPATFULL
TI Melanoma antigens and their use in diagnostic and therapeutic methods
IN Kawakami, Yutaka, Rockville, MD, United States
Rosenberg, Steven A., Potomac, MD, United States
PA The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)
PI US 5874560 19990223
AI US 1994-231565 19940422 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Huff, Sheela
LREP Morgan & Finnegan, L.L.P.
CLMN Number of Claims: 1

ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 2830
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a nucleic acid sequence encoding a melanoma antigen recognized by T lymphocytes, designated MART-1. This invention further relates to bioassays using the nucleic acid sequence, protein or antibodies of this invention to diagnose, assess or prognoses a mammal afflicted with melanoma or metastata melanoma. This invention also provides immunogenic peptides derived from the MART-1 melanoma antigen and a second melanoma antigen designated gp100. The proteins and peptides provided can serve as an immunogen or ***vaccine*** to prevent or treat melanoma.

L9 ANSWER 28 OF 34 USPATFULL
AN 1999:18729 USPATFULL
TI Recombinant vaccines to break self-tolerance
IN Rock, Edwin P., 4535 Hawthorne St., Washington, DC, United States 20016
PI US 5869057 19990209
AI US 1997-944982 19971007 (8)
RLI Continuation of Ser. No. US 1995-472455, filed on 7 Jun 1995, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Achutamurthy, Ponnathapura; Assistant Examiner: Bui, Phuong T.
LREP Keil & Weinkauf
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 20 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 2000
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to vaccines, specifically to the use of recombinant DNA technology to immunize against self proteins and to induce antibody against self protein in mammals. A process is described in which DNA sequences encoding a microbial gene product and a self gene protein are joined and expressed by means of a suitable DNA vector and a non-pathogenic microbial strain. The present invention further relates to the isolation and purification of a fusion peptide combining the non-toxic B subunit of an enterotoxigenic strain of E. coli (LTB) with the carboxyl terminal peptide (CTP) of human chorionic gonadotropin (hCG), as well as to the use of this fusion protein for immunological prophylaxis and therapy.

L9 ANSWER 29 OF 34 USPATFULL
AN 1998:162012 USPATFULL
TI Method for inducing a CD1-restricted immune response
IN Modlin, Robert L., Sherman Oaks, CA, United States
Sieling, Peter A., Malibu, CA, United States
Brenner, Michael B., Brookline, MA, United States
Porcelli, Steven A., Brighton, MA, United States
Brennan, Patrick J., Fort Collins, CO, United States
PA Brigham and Women's Hospital, Boston, MA, United States (U.S. corporation)
University of California, Los Angeles, Los Angeles, CA, United States (U.S. corporation)
Colorado State University Research Foundation, Fort Collins, CO, United

States (U.S. corporation)
PI US 5853737 19981229
AI US 1994-322979 19941013 (8)
RLI Continuation-in-part of Ser. No. US 1993-80072, filed on 19 Jun 1993, now abandoned which is a continuation-in-part of Ser. No. US 1992-989790, filed on 19 Dec 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Cunningham, Thomas M.
LREP Hamilton, Brook, Smith & Reynolds, P.C.
CLMN Number of Claims: 60
ECL Exemplary Claim: 1
DRWN 55 Drawing Figure(s); 38 Drawing Page(s)
LN.CNT 2536
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is based on the observation that CD1 functions to present foreign and autoimmune antigens to a select subpopulation of T-cells. Based on this observation, the present invention provides methods for detecting the presence of a CD1-presented antigen in a sample, methods for purifying CD1-presented antigens, vaccines containing CD1-presented antigens, methods of blocking CD1 antigen presentation, methods of identifying and/or isolating CD1 blocking agents, methods of inducing CD1 expression, and T-cell lines for use in the methods disclosed herein. The CD1-presented antigens of the invention, unlike MHC-presented antigens, are non-polypeptide hydrophobic antigens. In particular, a CD1-presented antigen isolated from several mycobacterial species is a lipoarabinomannan (LAM).

L9 ANSWER 30 OF 34 USPATFULL
AN 1998:151074 USPATFULL
TI Melanoma antigens and their use in diagnostic and therapeutic methods
IN Kawakami, Yutaka, Rockville, MD, United States
Rosenberg, Steven A., Potomac, MD, United States
PA The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)
PI US 5844075 19981201
AI US 1995-417174 19950405 (8)
RLI Continuation-in-part of Ser. No. US 1994-231565, filed on 22 Apr 1994
DT Utility
FS Granted
EXNAM Primary Examiner: Huff, Sheela
LREP Morgan & Finnegan, L.L.P.
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 18 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 4154
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a nucleic acid sequence encoding a melanoma antigen recognized by T lymphocytes, designated MART-1. This invention further relates to bioassays using the nucleic acid sequence, protein or antibodies of this invention to diagnose, assess or prognoses a mammal afflicted with melanoma or metastata melanoma. This invention also provides immunogenic peptides derived from the MART-1 melanoma antigen and a second melanoma antigen designated gp100. This invention further provides immunogenic peptides derived from the MART-1 melanoma antigen or gp100 antigen which have been modified to enhance their immunogenicity. The proteins and peptides provided can serve as an

immunogen or ***vaccine*** to prevent or treat melanoma.

L9 ANSWER 31 OF 34 USPATFULL
AN 1998:143882 USPATFULL
TI T cell receptor ligands and methods of using same
IN Germain, Ronald N., Potomac, MD, United States
Racioppi, Luigi, Bethesda, MD, United States
Gros, Franca Ronchese-Le, Brooklyn, New Zealand
PA The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)
PI US 5837477 19981117
AI US 1993-4936 19930115 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Saunders, David
LREP Knobbe, Martens, Olson & Bear, LLP
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 18 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1311
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention concerns TCR ligands with immunomodulatory properties, as well as methods of identifying such ligands and of using such ligands to modulate T cell effector responses.

L9 ANSWER 32 OF 34 USPATFULL
AN 1998:64956 USPATFULL
TI Immunogenic cancer proteins and peptides and methods of use
IN Calenoff, Emanuel, Chicago, IL, United States
PA Northwestern University, Evanston, IL, United States (U.S. corporation)
PI US 5763164 19980609
AI US 1994-191338 19940203 (8)
RLI Continuation-in-part of Ser. No. US 1993-49698, filed on 16 Apr 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Jones, W. Gary; Assistant Examiner: Rees, Dianne
LREP Brinks Hofer Gilson & Lione
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 13 Drawing Page(s)
LN.CNT 2928
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to tumor specific antigens and functional proteins of a tumor cell preparable by identifying protein presents in the tumor cell that are selectively immunogenic for tumor patients. The present invention still further provides a process of making a peptide library of tumor specific humoral antigens, a process of increasing the immunogenic specificity of a tumor-associated antigen, an assay kit for detecting the presence of an antibody immunoreactive with a tumor-specific antigen, and a process of making T cells sensitized to a tumor-specific antigen.

L9 ANSWER 33 OF 34 USPATFULL
AN 97:96843 USPATFULL
TI Methods and devices for immunizing a host against tumor-associated antigens through administration of naked polynucleotides which encode

tumor-associated antigenic peptides
IN Carson, Dennis A., Del Mar, CA, United States
Raz, Eyal, San Diego, CA, United States
PA The Regents of the University of California, Alameda, CA, United States (U.S. corporation)
PI US 5679647 19971021
AI US 1994-334260 19941103 (8)
DCD 20141101
RLI Continuation-in-part of Ser. No. US 1993-112440, filed on 26 Aug 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Eisenschenk, Frank C.
LREP Fish & Richardson P.C.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 31 Drawing Figure(s); 18 Drawing Page(s)
LN.CNT 2375
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention is directed to methods for introducing biologically active peptides into a host by administration of polynucleotides which operatively encode for the peptide of interest. In a preferred embodiment of the invention, a host who has been identified as having a tumor bearing at least one tumor-associated antigen is the recipient of a polynucleotide which operatively encodes for a foreign mimic of the tumor-associated antigen or a mutation of the ***self*** - ***antigen*** . The antigen-encoding polynucleotides are administered to host tissues which have a high concentration of antigen presenting cells in them relative to other host tissues. The method is particularly useful in treating cancer through induction of antigen-specific cytotoxic T lymphocytes in the host for lysis of tumor cells bearing the antigen. Devices and compositions for use in the methods of the invention are also described.

L9 ANSWER 34 OF 34 USPATFULL
AN 97:96556 USPATFULL
TI Methods of isolating CD1-presented antigens, vaccines comprising CD1-presented antigens, and cell lines for use in said methods
IN Porcelli, Steven A., Brighton, MA, United States
Brenner, Michael B., Brookline, MA, United States
Beckman, Evan M., Brookline, MA, United States
PA Brigham and Women's Hospital, Boston, MA, United States (U.S. corporation)
PI US 5679347 19971021
AI US 1994-322980 19941013 (8)
RLI Continuation-in-part of Ser. No. US 1993-80072, filed on 21 Jun 1993, now abandoned which is a continuation-in-part of Ser. No. US 1992-989790, filed on 10 Dec 1992, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Cunningham, Thomas M.
LREP Hamilton, Brook, Smith & Reynolds, P.C.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 55 Drawing Figure(s); 38 Drawing Page(s)
LN.CNT 2422
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is based on the observation that CD1 functions to present foreign and autoimmune antigens to a select subpopulation of T-cells. Based on this observation, the present invention provides methods for detecting the presence of a CD1-presented antigen in a sample, methods for purifying CD1-presented antigens, vaccines containing CD1-presented antigens, methods of blocking CD1 antigen presentation, methods of identifying and/or isolating CD1 blocking agents, methods of inducing CD1 expression, and T-cell lines for use in the methods disclosed herein. The CD1-presented antigens of the invention, unlike MHC-presented antigens, are non-polypeptide hydrophobic antigens. In particular, a CD1-presented antigen isolated from several mycobacterial species is a mycolic acid (MA).

```
=> s epitope over-expressed by tumo!r
L10           0 EPITOPE OVER-EXPRESSED BY TUMO!R

=> s epitope over-expressed by tumo!r cells
L11           0 EPITOPE OVER-EXPRESSED BY TUMO!R CELLS

=> s (tumo!r cell epitope) and (transfected)
L12           0 (TUMO!R CELL EPITOPE) AND (TRANSFECTED)

=> s HER2 and (transfected cell)
L13          96 HER2 AND (TRANSFECTED CELL)

=> dup rem l13
PROCESSING COMPLETED FOR L13
L14           79 DUP REM L13 (17 DUPLICATES REMOVED)

=> d his

     (FILE 'HOME' ENTERED AT 16:19:18 ON 03 APR 2002)

     FILE 'USPATFULL' ENTERED AT 16:24:00 ON 03 APR 2002
L1            10 S (EXPRESSION IN PLANT!) AND (ANTI-IDIOTYP?)
L2            10 DUP REM L1 (0 DUPLICATES REMOVED)

     FILE 'MEDLINE, BIOSIS, EMBASE, SCISEARCH, WPIDS, USPATFULL, CANCERLIT'
     ENTERED AT 16:26:36 ON 03 APR 2002
L3           210 S VACCINE AND (SELF-ANTIGEN)
L4            67 S L3(10A)(TRANSFORMED OR TRANSFECTED)
L5            18 S L3 AND (TRANSFORMED CELLS)
L6             0 S L3 AND (TRANFECTED CELL!)
L7            19 S L3 AND (TRANSFECTED CELL!)
L8            34 S L5 OR L7
L9            34 DUP REM L8 (0 DUPLICATES REMOVED)
L10            0 S EPITOPE OVER-EXPRESSED BY TUMO!R
L11            0 S EPITOPE OVER-EXPRESSED BY TUMO!R CELLS
L12            0 S (TUMO!R CELL EPITOPE) AND (TRANSFECTED)
L13           96 S HER2 AND (TRANSFECTED CELL)
L14           79 DUP REM L13 (17 DUPLICATES REMOVED)

=> s l14 and (plant expression )
L15           0 L14 AND (PLANT EXPRESSION )

=> s l14 and (transformed plant)
```

```
L16           0 L14 AND (TRANSFORMED PLANT)

=> s l14 and (recombinant plant)
L17           0 L14 AND (RECOMBINANT PLANT)

=> s l14 5a (recombinant plant)
MISSING OPERATOR L14 5A
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l14(5w)(recombinant plant)
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L130(5W)(RECOMBINA'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L132(5W)(RECOMBINA'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L134(5W)(RECOMBINA'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L136(5W)(RECOMBINA'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L138(5W)(RECOMBINA'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L140(5W)(RECOMBINA'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L142(5W)(RECOMBINA'
L18           0 L14(5W)(RECOMBINANT PLANT)

=> s vaccine(5w)(recombinant plant)
L19           4 VACCINE(5W)(RECOMBINANT PLANT)

=> dup rem l19
PROCESSING COMPLETED FOR L19
L20            1 DUP REM L19 (3 DUPLICATES REMOVED)

=> d l20 bib ab

L20  ANSWER 1 OF 1     MEDLINE                              DUPLICATE 1
AN   2001328100     MEDLINE
DN   21289395   PubMed ID: 11395200
TI   Inactivated recombinant plant virus protects dogs from a lethal challenge
     with canine parvovirus.
AU   Langeveld J P; Brennan F R; Martinez-Torrecuadrada J L; Jones T D;
     Boshuizen R S; Vela C; Casal J I; Kamstrup S; Dalsgaard K; Meloen R H;
     Bendig M M; Hamilton W D
CS   Institute for Animal Science and Health (ID-Lelystad), PO Box 65 NL-8200
     AB, Lelystad, The Netherlands.
SO   VACCINE, (2001 Jun 14) 19 (27) 3661-70.
     Journal code: X6O; 8406899. ISSN: 0264-410X.
CY   England: United Kingdom
DT   Journal; Article; (JOURNAL ARTICLE)
LA   English
FS   Priority Journals
EM   200109
ED   Entered STN: 20010924
     Last Updated on STN: 20010924
     Entered Medline: 20010920
AB   A   ***vaccine***   based upon a   ***recombinant***     ***plant***
```

virus (CPMV-PARVO1), displaying a peptide derived from the VP2 capsid protein of canine parvovirus (CPV), has previously been described. To date, studies with the vaccine have utilized viable plant chimaeric particles (CVPs). In this study, CPMV-PARVO1 was inactivated by UV treatment to remove the possibility of replication of the recombinant plant virus in a plant host after manufacture of the vaccine. We show that the inactivated CVP is able to protect dogs from a lethal challenge with CPV following parenteral immunization with the vaccine. Dogs immunized with the inactivated CPMV-PARVO1 in adjuvant displayed no clinical signs of disease and shedding of CPV in faeces was limited following CPV challenge. All immunized dogs elicited high titres of peptide-specific antibody, which neutralized CPV in vitro. Levels of protection, virus shedding and VP2-specific antibody were comparable to those seen in dogs immunized with the same VP2- peptide coupled to keyhole limpet hemocyanin (KLH). Since plant virus-derived vaccines have the potential for cost-effective manufacture and are not known to replicate in mammalian cells, they represent a viable alternative to current replicating vaccine vectors for development of both human and veterinary vaccines.

```
=> s (immunoglobulin)(10w)plant!
L21          42 (IMMUNOGLOBULIN)(10W) PLANT!

=> dup rem l21
PROCESSING COMPLETED FOR L21
L22           22 DUP REM L21 (20 DUPLICATES REMOVED)

=> d l22 1-22 bib ab

L22  ANSWER 1 OF 22  USPATFULL
AN      2001:178845  USPATFULL
TI      Method for producing immunoglobulins containing protection proteins in
        plants and their use
IN      Hiatt, Andrew C., San Diego, CA, United States
        Ma, Julian K.-C., London, United Kingdom
        Lehner, Thomas, Herts, United Kingdom
        Mostov, Keith E., San Francisco, CA, United States
PA      Planet Biotechnology, Inc., Kensington, CA, United States (U.S.
        corporation)
PI      US 6303341          B1   20011016
AI      US 1999-312157           19990514 (9)
RLI     Continuation of Ser. No. US 1995-434000, filed on 4 May 1995, now
        patented, Pat. No. US 6046037 Continuation-in-part of Ser. No. US
        1994-367395, filed on 30 Dec 1994, now abandoned
DT      Utility
FS      GRANTED
EXNAM   Primary Examiner: Benzion, Gary
CLMN    Number of Claims: 53
ECL     Exemplary Claim: 1
DRWN    1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 3418
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      The immunoglobulins of the present invention are useful therapeutic
        immunoglobulins against mucosal pathogens such as S. mutans. The
        immunoglobulins contain a protection protein that protects the
        immunoglobulins in the mucosal environment.
```

The invention also includes the greatly improved method of producing immunoglobulins in plants by producing the protection protein in the same cell as the other components of the immunoglobulins. The components of the immunoglobulin are assembled at a much improved efficiency. The method of the invention allows the assembly and high efficiency production of such complex molecules.

The invention also contemplates the production of immunoglobulins containing protection proteins in a variety of cells, including plant cells, that can be selected for useful additional properties. The use of immunoglobulins containing protection proteins as therapeutic antibodies against mucosal and other pathogens is also contemplated.

L22 ANSWER 2 OF 22 USPATFULL
AN 2001:125782 USPATFULL
TI Control of fruit ripening and senescence in plants
IN Keinan, Ehud, Timrat, Israel
Itzhaky, Harel, Atlit, Israel
Aboud-Pirak, Esther, Kiryat Tivon, Israel
Gepstein, Shimon, Haifa, Israel
PA Vitality Biotechnologies, Inc., Orangeburg, NY, United States (U.S. corporation)
PI US 6271009 B1 20010807
AI US 1999-245736 19990208 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Patterson, Jr., Charles L.
LREP Friedman, Mark M.
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 1109
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Hapten and antigen designed for eliciting catalytic antibodies effective in inhibiting the ethylene production pathway in plants by deactivating a precursor thereof either by decomposition or derivatization. Catalytic antibodies effective in inhibiting the ethylene production pathway in plants by deactivating a precursor thereof. Genes encoding for such catalytic antibodies and plants and cells expressing these genes and producing the catalytic antibodies for controlling the ripening of fruits and vegetables, as well as for controlling senescence of plant tissue.

L22 ANSWER 3 OF 22 MEDLINE DUPLICATE 1
AN 2001199943 MEDLINE
DN 21183142 PubMed ID: 11289507
TI Assembly and plasma membrane targeting of recombinant ***immunoglobulin*** chains in ***plants*** with a murine immunoglobulin transmembrane sequence.
AU Vine N D; Drake P; Hiatt A; Ma J K
CS Department of Oral Medicine, Guy's Hospital, London, UK.
SO PLANT MOLECULAR BIOLOGY, (2001 Jan) 45 (2) 159-67.
Journal code: A6O; 9106343. ISSN: 0167-4412.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals

EM 200104
ED Entered STN: 20010502
Last Updated on STN: 20010502
Entered Medline: 20010426
AB The cDNA encoding a full-length murine immunoglobulin gamma 1 heavy chain with its native leader sequence, transmembrane and intracellular domains was introduced into transgenic plants. Transformed plants expressed the recombinant polypeptide, but, in contrast to plants expressing the heavy chain without transmembrane sequence, the protein appeared to be associated with a plant cell membrane. Extraction of the membrane-associated heavy chain required the presence of a non-ionic detergent, and immunofluorescence studies of protoplasts demonstrated surface expression of membrane Ig heavy chain on up to 40% of the cells from a transgenic leaf. In plants expressing both the membrane Ig heavy chain and its partner light chain, functional antibody was also localised to the plant cell membrane and retention of the heavy chain at this site appeared to have no effect on the efficiency of antibody assembly. This approach of localising and accumulating recombinant antibody in cell membranes may have a number of applications, including passive immunisation against plant pathogens.

L22 ANSWER 4 OF 22 USPATFULL
AN 2000:80568 USPATFULL
TI Method for producing antibodies in plant cells
IN Russell, David R., Madison, WI, United States
Fuller, James T., Oregon, WI, United States
PA Monsanto Company, St. Louis, MO, United States (U.S. corporation)
PI US 6080560 20000627
AI US 1994-279772 19940725 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Smith, Lynette R. F.; Assistant Examiner: Haas, Thomas
LREP McKenna & Cuneo LLP
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 793
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method for producing antibodies in plant cells including the steps of providing a genetic construct that encodes a secretable mammalian single chain antibody, delivering copies of the construct into a liquid suspension culture of tobacco cells, selecting for cells that have acquired the genetic construct, allowing the antibody to accumulate in the liquid to a concentration over 25 mg/l and isolating the antibody away from the tobacco cells.

L22 ANSWER 5 OF 22 USPATFULL
AN 2000:40882 USPATFULL
TI Method for producing immunoglobulins containing protection proteins in plants and their use
IN Hiatt, Andrew C., 660 Torrance St., San Diego, CA, United States 92103
Ma, Julian K.-C., 81 Grierson Road, London, United Kingdom SE231PE
Lehner, Thomas, 2 Wood Ride Hadley Wood, Barnet, Herts, United Kingdom EN40LL
Mostov, Keith E., 1975 Funston Ave., San Francisco, CA, United States 94116
PI US 6046037 20000404

AI US 1995-434000 19950504 (8)
RLI Continuation-in-part of Ser. No. US 1994-367395, filed on 30 Dec 1994, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Smith, Lynette F.; Assistant Examiner: Haas, Thomas
LREP Lyon & Lyon LLP
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 4923
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The immunoglobulins of the present invention are useful therapeutic immunoglobulins against mucosal pathogens such as S. mutans. The immunoglobulins contain a protection protein that protects the immunoglobulins in the mucosal environment.

The invention also includes the greatly improved method of producing immunoglobulins in plants by producing the protection protein in the same cell as the other components of the immunoglobulins. The components of the immunoglobulin are assembled at a much improved efficiency. The method of the invention allows the assembly and high efficiency production of such complex molecules.

The invention also contemplates the production of immunoglobulins containing protection proteins in a variety of cells, including plant cells, that can be selected for useful additional properties. The use of immunoglobulins containing protection proteins as therapeutic antibodies against mucosal and other pathogens is also contemplated.

L22 ANSWER 6 OF 22 MEDLINE DUPLICATE 2
AN 2000498110 MEDLINE
DN 20398342 PubMed ID: 10938364
TI Assembly, secretion, and vacuolar delivery of a hybrid ***immunoglobulin*** in ***plants*** .
AU Frigerio L; Vine N D; Pedrazzini E; Hein M B; Wang F; Ma J K; Vitale A
CS Department of Biological Sciences, University of Warwick, Coventry CV4 7AL, United Kingdom.
SO PLANT PHYSIOLOGY, (2000 Aug) 123 (4) 1483-94.
Journal code: P98; 0401224. ISSN: 0032-0889.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200010
ED Entered STN: 20001027
Last Updated on STN: 20001027
Entered Medline: 20001018
AB Secretory immunoglobulin (Ig) A is a decameric Ig composed of four alpha-heavy chains, four light chains, a joining (J) chain, and a secretory component (SC). The heavy and light chains form two tetrameric Ig molecules that are joined by the J chain and associate with the SC. Expression of a secretory monoclonal antibody in tobacco (Nicotiana tabacum) has been described: this molecule (secretory IgA/G [SIgA/G]) was modified by having a hybrid heavy chain sequence consisting of IgG gamma-chain domains linked to constant region domains of an IgA alpha-chain. In tobacco, about 70% of the protein assembles to its final,

decameric structure. We show here that SIgA/G assembly and secretion are slow, with only approximately 10% of the newly synthesized molecules being secreted after 24 h and the bulk probably remaining in the endoplasmic reticulum. In addition, a proportion of SIgA/G is delivered to the vacuole as at least partially assembled molecules by a process that is blocked by the membrane traffic inhibitor brefeldin A. Neither the SC nor the J chain are responsible for vacuolar delivery, because IgA/G tetramers have the same fate. The parent IgG tetrameric molecule, containing wild-type gamma-heavy chains, is instead secreted rapidly and efficiently. This strongly suggests that intracellular retention and vacuolar delivery of IgA/G is due to the alpha-domains present in the hybrid alpha/gamma-heavy chains and indicates that the plant secretory system may partially deliver to the vacuole recombinant proteins expected to be secreted.

L22 ANSWER 7 OF 22 USPATFULL
AN 1999:117748 USPATFULL
TI Transgenic plants expressing assembled secretory antibodies
IN Hein, Mich B., Fallbrook, CA, United States
Hiatt, Andrew, San Diego, CA, United States
Ma, Julian K-C, London, United Kingdom
PA The Scripps Research Institute, La Jolla, CA, United States (U.S. corporation)
PI US 5959177 19990928
AI US 1996-642406 19960503 (8)
RLI Continuation-in-part of Ser. No. US 1992-971951, filed on 5 Nov 1992, now patented, Pat. No. US 5639947 which is a continuation of Ser. No. US 1990-591823, filed on 2 Oct 1990, now patented, Pat. No. US 5202422 which is a continuation-in-part of Ser. No. US 1989-427765, filed on 27 Oct 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Robinson, Douglas W.; Assistant Examiner: Haas, Thomas
LREP Fitting, Thomas, Holmes, Emily
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 4721
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to expression and assembly of foreign multimeric proteins--e.g., antibodies--in plants, as well as to transgenic plants that express such proteins. In one of several preferred embodiments, the generation and assembly of functional secretory antibodies in plants is disclosed. The invention also discloses compositions produced by the transgenic plants of the present invention and methods of using same.

L22 ANSWER 8 OF 22 USPATFULL
AN 1999:27437 USPATFULL
TI Method for producing DNA encoding cystic fibrosis transmembrane conductance regulator (CFTR) protein in E. coli
IN Gregory, Richard J., Carlsbad, CA, United States
PA Genzyme Corporation, Framingham, MA, United States (U.S. corporation)
PI US 5876974 19990302
AI US 1994-298522 19940830 (8)
RLI Continuation of Ser. No. US 1993-87132, filed on 2 Jul 1993 which is a continuation of Ser. No. US 1990-613592, filed on 15 Nov 1990, now abandoned which is a continuation-in-part of Ser. No. US 1990-589295,

filed on 27 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1990-488307, filed on 5 Mar 1990, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Carlson, Karen C.
LREP Baker & Botts, L.L.P
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 26 Drawing Figure(s); 23 Drawing Page(s)
LN.CNT 1815
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A pharmaceutical composition comprising a vector itself comprising a purified and isolated DNA sequence consisting essentially of a DNA sequence encoding a polypeptide having an amino acid sequence sufficiently duplicative of CFTR to allow possession of the biological property of correction of a defect in epithelial cell anion channel regulation.

L22 ANSWER 9 OF 22 MEDLINE DUPLICATE 3
AN 1999110954 MEDLINE
DN 99110954 PubMed ID: 9892697
TI Rapid production of specific vaccines for lymphoma by expression of the tumor-derived single-chain Fv epitopes in tobacco plants.
AU McCormick A A; Kumagai M H; Hanley K; Turpen T H; Hakim I; Grill L K; Tuse D; Levy S; Levy R
CS Biosource Technologies, Inc., 3333 Vacavalley Parkway, Suite 1000, Vacaville, CA 95688, USA.
NC AI37219 (NIAID)
CA33399 (NCI)
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1999 Jan 19) 96 (2) 703-8.
Journal code: PV3; 7505876. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199903
ED Entered STN: 19990326
Last Updated on STN: 19990326
Entered Medline: 19990316
AB Rapid production of protein-based tumor-specific vaccines for the treatment of malignancies is possible with the plant-based transient expression system described here. We created a modified tobamoviral vector that encodes the idiotype-specific single-chain Fv fragment (scFv) of the ***immunoglobulin*** from the 38C13 mouse B cell lymphoma. Infected Nicotiana benthamiana ***plants*** contain high levels of secreted scFv protein in the extracellular compartment. This material reacts with an anti-idiotype antibody by Western blotting, ELISA, and affinity chromatography, suggesting that the plant-produced 38C13 scFv protein is properly folded in solution. Mice vaccinated with the affinity-purified 38C13 scFv generate >10 micrograms/ml anti-idiotype immunoglobulins. These mice were protected from challenge by a lethal dose of the syngeneic 38C13 tumor, similar to mice immunized with the native 38C13 IgM-keyhole limpet hemocyanin conjugate vaccine. This rapid production system for generating tumor-specific protein vaccines may provide a viable strategy for the treatment of non-Hodgkin's lymphoma.

L22 ANSWER 10 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2000:155453 BIOSIS
DN PREV200000155453
TI Expression of a murine ***immunoglobulin*** with native transmembrane sequence in transgenic ***plants*** .
AU Vine, N. D. (1); Ma, J. K.-C. (1)
CS (1) Department of Oral Medicine and Pathology, GKT Institute for Medicine and Dentistry, London, SE1 9RT UK
SO Immunology., (Dec., 1999) Vol. 98, No. suppl. 1, pp. 148.
Meeting Info.: Joint Congress of the British Society for Immunology and the British Society for Allergy & Clinical Immunology. Harrogate, England, UK November 30-December 03, 1999 British Society for Allergy & Clinical Immunology
. ISSN: 0019-2805.
DT Conference
LA English
SL English

L22 ANSWER 11 OF 22 USPATFULL
AN 97:91555 USPATFULL
TI Methods and therapeutic compositions for treating cystic fibrosis
IN Cheng, Seng Hing, Wellesley, MA, United States
Fang, Shaona Lee, Sudbury, MA, United States
Hoppe, IV, Henry, Acton, MA, United States
Smith, Alan Edward, Dover, MA, United States
PA Genzyme Corporation, Cambridge, MA, United States (U.S. corporation)
PI US 5674898 19971007
AI US 1993-72708 19930607 (8)
RLI Continuation-in-part of Ser. No. US 1992-935603, filed on 26 Aug 1992, now abandoned which is a continuation-in-part of Ser. No. US 1990-613592, filed on 15 Nov 1990, now abandoned 76 Ser. No. US 1990-589295, filed on 27 Sep 1990, now abandoned which is a continuation-in-part of Ser. No. US 1990-488307, filed on 5 Mar 1990, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: O'Sullivan, Peter
CLMN Number of Claims: 34
ECL Exemplary Claim: 1
DRWN 22 Drawing Figure(s); 17 Drawing Page(s)
LN.CNT 2257
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions for treating Cystic Fibrosis by mobilizing mutant forms of CFTR, which retain at least some functional activity, to the plasma membrane where they can mediate chloride ion transport are disclosed.

L22 ANSWER 12 OF 22 USPATFULL
AN 97:52192 USPATFULL
TI Compositions containing glycopolypeptide multimers and methods of making same in plants
IN Hiatt, Andrew C., San Diego, CA, United States
Hein, Mich B., Fallbrook, CA, United States
PA The Scripps Research Institute, La Jolla, CA, United States (U.S. corporation)
PI US 5639947 19970617
AI US 1992-971951 19921105 (7)

RLI Continuation of Ser. No. US 1990-591823, filed on 2 Oct 1990, now patented, Pat. No. US 5202422 which is a continuation-in-part of Ser. No. US 1989-427765, filed on 27 Oct 1989, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Moody, Patricia R.
LREP Logan, April C.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 12 Drawing Figure(s); 10 Drawing Page(s)
LN.CNT 3503
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention contemplates a transgenic plant having somatic and germ cells containing at least two mammalian genes coding for polypeptides capable of autogenously associating with each other to form a biologically active multimer. In addition, the invention describes a method for producing a glycopolypeptide multimer by introducing first and second mammalian genes encoding the constituent parts of the multimer into first and second respective members of a plant species, generating a progeny from the first and second plant species members, and isolating the glycopolypeptide multimer from the progeny plant.

L22 ANSWER 13 OF 22 MEDLINE DUPLICATE 4
AN 97432065 MEDLINE
DN 97432065 PubMed ID: 9286069
TI Non-cultivable phytopathogenic mycoplasmas: characterization, detection and perspectives for control.
AU Garnier M
CS Laboratoire de Biologie Cellulaire et Moleculaire INRA BP 81, Villenave d'Ornon, France.
SO WIENER KLINISCHE WOCHENSCHRIFT, (1997 Aug 8) 109 (14-15) 613-7. Ref: 46
Journal code: XOP; 21620870R. ISSN: 0043-5325.
CY Austria
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199710
ED Entered STN: 19971105
Last Updated on STN: 19971105
Entered Medline: 19971023
AB Phytoplasmas (ex MLOs) and spiroplasmas are important groups of plant pathogenic mollicutes, discovered in 1967 and 1970 respectively. Spiroplasmas, like other mollicutes, can be cultured in artificial media and are thus well characterized. On the contrary, phytoplasmas have resisted in vitro cultivation and their study was difficult until the recent development of molecular techniques. From the sequence of their 16S rDNA, phytoplasmas have been shown to be true mollicutes. Fourteen phytoplasma subclasses have been defined, but only two phytoplasmas have so far been named at the genus and species level. Monoclonal antibodies, DNA probes and PCR primers for the specific detection of various phytoplasmas have been obtained. These showed that a given phytoplasma can infect a broad range of plants, while others are restricted to a single plant species. Specific reagents are also used for identification of insect vectors and reservoir plants of the various phytoplasmas. Plant pathogenic mollicutes cannot be controlled chemically today, since the use

of antibiotic treatment is forbidden in agriculture. However, the growth and metabolism of mollicutes are known to be inhibited by antibodies and this provides a hopeful approach for future control of these agents in plants. Indeed, it has been shown recently that plants can be engineered to express and assemble functional ***immunoglobulin*** chains. Transgenic tobacco ***plants*** expressing an antibody against the stolbur phytoplasmas have been developed. They have now to be challenged with the phytoplasma to determine if they have acquired resistance to this mollicute.

L22 ANSWER 14 OF 22 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1996-333987 [33] WPIDS
DNN N1996-281425 DNC C1996-105533
TI ***Immunoglobulin*** and protection protein complex and its prodn. in ***plants*** - useful for passive immunisation against mucosal antigens,
esp. against S. mutans and S. sorbinus to prevent dental caries.
DC B04 D16 P13
IN HIATT, A C; MA, J K; LEHNER, T; MA, J K C; MOSTOV, K E; MA, J K -
PA (PLAN-N) PLANT BIOTECHNOLOGY INC; (UNME-N) UNITED MEDICAL & DENTAL SCHOOLS GUYS; (PLAN-N) PLANET BIOTECHNOLOGY INC; (HIAT-I) HIATT A C; (LEHN-I) LEHNER T; (MAJK-I) MA J K -; (MOST-I) MOSTOV K E
CYC 33
PI WO 9621012 A1 19960711 (199633)* EN 152p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AU BR CA CN CZ FI HU JP KR MX NO NZ PL RU SG
AU 9646088 A 19960724 (199644)
EP 807173 A1 19971119 (199751) EN
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
JP 11504901 W 19990511 (199929) 131p
US 6046037 A 20000404 (200024)
AU 722668 B 20000810 (200043)
AU 2000071534 A 20010208 (200113)#
US 6303341 B1 20011016 (200164)
ADT WO 9621012 A1 WO 1995-US16889 19951227; AU 9646088 A AU 1996-46088 19951227; EP 807173 A1 EP 1995-944237 19951227, WO 1995-US16889 19951227; JP 11504901 W WO 1995-US16889 19951227, JP 1996-521124 19951227; US 6046037 A CIP of US 1994-367395 19941230, US 1995-434000 19950504; AU 722668 B AU 1996-46088 19951227; AU 2000071534 A Div ex AU 1996-46088 19951227, AU 2000-71534 20001110; US 6303341 B1 CIP of US 1994-367395 19941230, Cont of US 1995-434000 19950504, US 1999-312157 19990514
FDT AU 9646088 A Based on WO 9621012; EP 807173 A1 Based on WO 9621012; JP 11504901 W Based on WO 9621012; AU 722668 B Previous Publ. AU 9646088, Based on WO 9621012; AU 2000071534 A Div ex AU 722668; US 6303341 B1 Cont of US 6046037
PRAI US 1995-434000 19950504; US 1994-367395 19941230; AU 2000-71534 20001110; US 1999-312157 19990514
AB WO 9621012 A UPAB: 19960823
Immunoglobulin (Ig) comprising a protection protein (PP) in association with an Ig derived heavy chain having at least a portion of an antigen binding domain, is new. Also claimed are: (1) eukaryotic cell (pref. an alfalfa or tobacco cell) contg. (a) the claimed Ig, (b) a nucleotide sequence encoding a PP or (c) a PP; (2) plant cell contg. a nucleotide sequence encoding a PP and a Ig derived heavy chain having at least a portion of an antigen binding domain; (3) compsn. comprising the claimed Ig, and plant macromolecules; and (4) tetratransgenic organism comprised of cells contg. 4 different transgenes each encoding a different

polypeptide of a multiple mol., where at least 1 of each of the different polypeptides is associated together in the multiple mol..

USE - The Ig mols. are useful for passively immunising animals against mucosal pathogens. Specifically, where the antigen binding domain is derived from the Guy's 13 antibody, the Ig can be used to prevent dental caries by binding, e.g. S. mutans serotypes c, e and f, or S. sorbinus serotypes d and g (claimed). The Ig can be administered as part of a plant extract as in (3), after manipulating taste and texture to enable oral, dental or gastric admin.

ADVANTAGE - The protection proteins protect the Ig in the mucosal environment, therefore enhancing its effectiveness. The tetratransgenic plants can efficiently assemble a tetrameric complex of alpha, J and kappa Ig chains with a specific PP.

Dwg.0/1

L22 ANSWER 15 OF 22 MEDLINE DUPLICATE 5
AN 94291711 MEDLINE
DN 94291711 PubMed ID: 8020548
TI Assembly of monoclonal antibodies with IgG1 and IgA heavy chain domains in transgenic tobacco plants.
AU Ma J K; Lehner T; Stabila P; Fux C I; Hiatt A
CS Department of Immunology, UMDS Guy's Hospital, London, GB.
SO EUROPEAN JOURNAL OF IMMUNOLOGY, (1994 Jan) 24 (1) 131-8.
Journal code: EN5; 1273201. ISSN: 0014-2980.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199408
ED Entered STN: 19940815
Last Updated on STN: 19940815
Entered Medline: 19940802
AB The genes encoding the heavy and light chains of a murine monoclonal antibody (mAb Guy's 13) have been cloned and expressed in Nicotiana tabacum. Transgenic plants have been regenerated that secrete full-length Guy's 13 antibody. By manipulation of the heavy chain gene sequence, constant region domains from an ***immunoglobulin*** alpha heavy chain have been introduced, and ***plants*** secreting Guy's 13 mAb with chimeric gamma/alpha heavy chains have also been produced. For each plant antibody, light and heavy chains have been detected by Western blot analysis and the fidelity of assembly confirmed by demonstrating that the antibody is fully functional, by antigen binding studies. Furthermore, the plant antibodies retained the ability to aggregate streptococci, which confirms that the bivalent antigen-binding capacity of the full length antibodies is intact. The results demonstrate that IgA as well as IgG class antibodies can be assembled correctly in tobacco plants and suggest that transgenic plants may be suitable for high-level expression of more complex genetically engineered immunoglobulin molecules. Since mAb Guy's 13 prevents streptococcal colonization in humans, transgenic plant technology may have therapeutic applications.

L22 ANSWER 16 OF 22 USPATFULL
AN 93:29299 USPATFULL
TI Compositions containing plant-produced glycopolypeptide multimers, multimeric proteins and method of their use
IN Hiatt, Andrew C., San Diego, CA, United States
Hein, Mich B., Fallbrook, CA, United States

PA The Scripps Research Institute, La Jolla, CA, United States (U.S. corporation)
PI US 5202422 19930413
AI US 1990-591823 19901002 (7)
RLI Continuation-in-part of Ser. No. US 1989-427765, filed on 27 Oct 1989
DT Utility
FS Granted
EXNAM Primary Examiner: Lacey, David L.; Assistant Examiner: Budens, Robert D.
LREP Bingham, Douglas A., Fitting, Thomas, Logan, April C.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1,5
DRWN 12 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 3337
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention contemplates glycopolypeptide multimers having a polypeptide that contain an immunoglobulin amino acid residue sequence and an oligosaccharide that comprises a core pentasaccharide and N-acetylglucosamine-containing outer branches, such that the multimer is free from sialic acid. The production of passive immunity in an animal by administering a sialic acid free glycopolypeptide multimer is also contemplated. In addition, the invention describes a method for producing a glycopolypeptide multimer by introducing first and second mammalian genes encoding the constituent parts of the multimer into first and second respective members of a plant species, generating a progeny from the first and second plant species members, and isolating the glycopolypeptide multimer from the progeny plant.

L22 ANSWER 17 OF 22 MEDLINE DUPLICATE 6
AN 92003696 MEDLINE
DN 92003696 PubMed ID: 1717050
TI 'Phytoantibodies': a general vector for the expression of ***immunoglobulin*** domains in transgenic ***plants*** .
AU Benvenuto E; Ordas R J; Tavazza R; Ancora G; Biocca S; Cattaneo A; Galeffi P
CS ENEA Dipartimento Ricera e Sviluppo Agroindustrali, Divisione Ingegneria Genetica C.P.2400, Roma, Italy.
SO PLANT MOLECULAR BIOLOGY, (1991 Oct) 17 (4) 865-74.
Journal code: A6O; 9106343. ISSN: 0167-4412.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199111
ED Entered STN: 19920124
Last Updated on STN: 19960129
Entered Medline: 19911121
AB Sequences encoding the immunoglobulin heavy-chain variable (VH) domains were engineered in a new general purpose vector to transform plants via Agrobacterium. The expression of an isolated VH domain (IVD) after introduction into the plant genome has been monitored by northern, western and immunohistochemical analysis. Immunoblotting showed that the polypeptide was stably expressed and accounted for up to 1% of the soluble protein fraction. It is therefore proposed that single ***immunoglobulin*** domains of suitable specificity expressed in ***plants*** may constitute an effective system to inhibit the activity of molecules involved in plant pathology or plant development.

L22 ANSWER 18 OF 22 MEDLINE DUPLICATE 7
AN 91199725 MEDLINE
DN 91199725 PubMed ID: 1707780
TI Opportunities for bioactive compounds in transgenic plants.
AU Hall T C; Bustos M M; Anthony J L; Yang L J; Domoney C; Casey R
CS Biology Department, Texas A&M University, College Station 77843-3258.
SO CIBA FOUNDATION SYMPOSIUM, (1990) 154 177-94; discussion 194-7. Ref: 86
Journal code: D7X; 0356636. ISSN: 0300-5208.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199105
ED Entered STN: 19910607
Last Updated on STN: 20000303
Entered Medline: 19910521
AB A variety of bioactive compounds have now been introduced into plants through recombinant DNA techniques. Early examples included genes encoding proteins conferring herbicide tolerance and insect or virus resistance. More recently, pharmacologically useful compounds such as enkephalin and ***immunoglobulin*** have been produced in transgenic ***plants*** . Modification of existing compounds to provide better nutritional value or improved functional properties is exemplified in the case of seed storage proteins. The value of RNAs as bioactive compounds for suppression of undesirable products and viral infection has now been demonstrated in plants. The developmentally regulated expression of novel bioactive compounds in defined tissues, and their targeting to specific subcellular locations, is becoming of ever increasing economic and sociological importance as knowledge of the molecular mechanisms involved accumulates.

L22 ANSWER 19 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1988:379232 BIOSIS
DN BA86:63142
TI ISOLATION PURIFICATION AND SEROLOGY OF RICE TUNGRO BACILLIFORM AND RICE TUNGRO SPHERICAL VIRUSES.
AU CABAUATAN P Q; HIBINO H
CS INT. RICE RES. INST., P.O. BOX 933, MANILA, PHILIPPINES.
SO PLANT DIS, (1988) 72 (6), 526-528.
CODEN: PLDIDE. ISSN: 0191-2917.
FS BA; OLD
LA English
AB Rice [Oryza sativa L.] seedlings were inoculated by rice green leafhoppers (Nephotettix virescens) that had fed on rice plants infected with both rice tungro bacilliform virus (RTBV) and rice tungro spherical virus-infected plants were identified and selected using antiserum to rice waika virus which is very closely related, if not identical to, RTSV. Rice tungro spherical virus was propagated by inoculating rice seedlings using leafhoppers. To multiply RTBV, seedlings were inoculated by leafhoppers that had fed first on plants infected with both RTBV and RTSV, second on anti-RTSV ***immunoglobulin*** through membrane, and then on RTBV-infected ***plants*** . Rice tungro bacilliform virus and RTSV were purified separately from their respectively infected plants by heating sap 1 hr at 40 C, by driselase treatment, and by polyethylene glycol precipitation, differential centrifugations, and sucrose density gradient centrifugation. Purified RTBV fractions contained bacilliform

particles 30-35 nm in width and 160-220 nm in length. Purified RTSV fractions contained isometric particles 30 nm in diameter. Both fractions had UV absorption spectra typical of nucleoprotein. Rabbit antisera obtained had titers of 1/2,560 for RTBV and 1/640 for RTSV by the ring-interface precipitin test. The latex test and ELISA specifically detected RTBV and RTSV in leaf extracts. The antisera were virus-specific.

L22 ANSWER 20 OF 22 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1985-007635 [02] WPIDS
DNC C1985-003107
TI Capsule with crosslinked protein walls around living cells - useful as source of antibodies, etc. e.g. injection.
DC A96 B04 D16
IN MEYERS, W E; TICE, T R
PA (STOL-N) STOLLE RES & DEV
CYC 14
PI EP 129619 A 19850102 (198502)* EN 28p
R: AT BE CH DE FR GB IT LI LU NL SE
JP 60025929 A 19850208 (198512)#
CA 1214389 A 19861125 (198652)#
EP 129619 B 19880518 (198820) EN
R: AT BE CH DE FR GB IT LI LU NL SE
DE 3376660 G 19880623 (198826)
JP 04008034 B 19920213 (199211)# 8p
JP 05176754 A 19930720 (199333)# 7p
JP 06085711 B2 19941102 (199442)#
ADT EP 129619 A EP 1983-303605 19830622; JP 04008034 B JP 1983-131097 19830720; JP 05176754 A Div ex JP 1983-131097 19830720, JP 1991-287274 19830720; JP 06085711 B2 Div ex JP 1983-131097 19830720, JP 1991-287274 19830720
FDT JP 06085711 B2 Based on JP 05176754
PRAI EP 1983-303605 19830622
AB EP 129619 A UPAB: 19941122
Capsule contg. living cells and having a wall comprising a cross-linked protein is new.

Pref. the protein is albumin, casein, collagen, gelatin, soy protein, gluten or immunoglobulin. The wall has pores of 5 Angstroms to 15 micrometres. There may be an approp. nutrient medium for the cells in the capsules. Suitably they have average dia. less than 250 micrometres.

USE/ADVANTAGE - The living cells can be encapsulated under sufficiently mild conditions for them to retain viability while a controlled porosity can be formed in the capsule walls. The cells may be used as a source of macromolecules or biological prods., such as antibodies or virions, and such macromolecules can pass through the pores in the capsule wall. Similarly when the capsules are injected into a host, while the entry of host cells into the capsules to destroy the cells is prevented.

L22 ANSWER 21 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1983:240854 BIOSIS
DN BA75:90854
TI A HYDROXY PROLINE-RICH BACTERIAL AGGLUTININ FROM POTATO SOLANUM-TUBEROSUM CULTIVAR KATAHDIN ITS LOCALIZATION BY IMMUNO FLUORESCENCE.
AU LEACH J E; CANTRELL M A; SEQUEIRA L
CS DEP. PLANT PATHOL., UNIV. WISCONSIN, MADISON 53706, USA.
SO PHYSIOL PLANT PATHOL, (1982 (RECD 1983)) 21 (3), 319-326.
CODEN: PPPYBC. ISSN: 0048-4059.

FS BA; OLD
LA English
AB Potato tubers (cv. Katahdin) contain a hydroxyproline-rich glycoprotein (HPRG) that agglutinates certain avirulent strains of the bacterial wilt pathogen, Pseudomonas solanacearum. This and similar agglutinins are thought to play an important role in the immobilization of incompatible bacteria in potato and tobacco tissues. The agglutinin from potato tubers was purified by ion exchange chromatography Antisera to the intact or deglycosylated agglutinin were obtained from New Zealand white rabbits after multiple intradermal and intramuscular injections. Immunoglobulins were precipitated with (NH4)2SO4 and antibodies specific for the agglutinin were purified by affinity chromatography. Frozen sections of petiole or leaf tissue from tobacco and potato were treated firstly with sheep normal immunoglobulin and then with either anti-agglutinin antibodies or normal rabbit immunoglobulin for 20 min. The sections were rinsed and then treated with fluorescein isothiocyanate-conjugated sheep anti-rabbit immunoglobulin. When the sections were examined by fluorescence microscopy, it was determined that anti-agglutinin antibodies bound only to the cell walls, particularly those of parenchyma. Fluorescence was also evident on the cell walls of tobacco and potato xylem vessels, epidermis and collenchyma. Control sections treated with normal rabbit immunoglobulin did not bind the labeled anti-rabbit ***immunoglobulin*** . Cell walls in tissue sections from non-solanaceous ***plants*** such as soybean, corn or begonia, treated in the same manner, were also stained by the labeled antibodies. Antibodies to both intact and deglycosylated potato agglutinin bound to these plant cell walls, indicating that the receptors are proteins with antigen determinants which are similar to those of proteins from potato or tobacco cell walls. Such proteins (HPRGs) are common components of plant cell walls and may play a role in immobilizing bacteria that gain access to the intercellular spaces.

L22 ANSWER 22 OF 22 MEDLINE DUPLICATE 8
AN 76252563 MEDLINE
DN 76252563 PubMed ID: 821467
TI Identification of N-terminal methionine in the precursor of ***immunoglobulin*** light chain. Initiation of translation of messenger ribonucleic acid in ***plants*** and animals.
AU Schechter I; Burstein Y
SO BIOCHEMICAL JOURNAL, (1976 Mar 1) 153 (3) 543-50.
Journal code: 9YO; 2984726R. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197609
ED Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19760925
AB The proteins programmed in the wheat-germ cell-free system by the mRNA coding for the MOPC-321 mouse myeloma L (light) chain were labelled with [35S]methionine, [4,5-3H]leucine or [3-3H]serine, and were subjected to amino acid-sequence analyses. Over 95% of the total cell-free product was sequenced as one homogeneous protein, which corresponds to the precursor of the L-chain protein. In the precursor, 20 amino acid residues precede

the N-terminus of the mature protein. This extra piece contains one methionine residue at the N-terminus, one serine residue at position 18, and six leucine residues, which are clustered in two triplets at positions 6, 7, 8 and 11, 12, 13. The identification of methionine at the N-terminus of the precursor is in agreement with the evidence showing that unblocked methionine is the initiator residue for protein synthesis in eukaryotes. The absence of methionine at position 20, which precedes the N-terminal residue of the mature protein, suggests that myeloma cells synthesize the precursor. However, within the cell the precursor should be rapidly processed to the mature L chain, since precursor molecules have not yet been found in the intact animal. The abundance (30%) of leucine residues indicates that the extra-piece moiety is quite hydrophobic. The extra piece of the MOPC-321 L-chain precursor synthesized with the aid of the Krebs II ascites cell-free system is of identical size and it has the same leucine sequence [Schechter et al. (1975) Science 188, 160-162]. This indicates that cell-free systems derived from the plant and animal kingdom initiate mRNA translation from the same point. It is shown that the amino acid sequence of minute amounts of a highly labelled protein (0.1 pmol) can be faithfully determined in the presence of a large excess (over 2000 000-fold) of unrelated non-radioactive proteins.

```
=> s (tumo!r specific vaccine)(20w)(plant)
L23           0 (TUMO!R SPECIFIC VACCINE)(20W)(PLANT)

=> s (tumo!r specific vaccine)(20w)(transformed plant)
```